

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

Bartels und Partner
BARTELS UND PARTNER Patentanwälte
Lange Strasse 51
70174 Stuttgart
ALLEMAGNE
Eingegangen: 04. MAI 2006
Received:

TERMIN

Date of mailing (day/month/year) 27 April 2006 (27.04.2006)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 40cdh/229205	
International application No. PCT/EP2004/003698	International filing date (day/month/year) 07 April 2004 (07.04.2004)
Applicant HYDAC FLUIDTECHNIK GMBH et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yolaine Cussac
Facsimile No. +41 22 740 14 35	Facsimile No. +41 22 338 70 80

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Bartels und Partner
Patentanwälte

Eingegangen:

Received:

04. MAI 2006

TERMIN

Applicant's or agent's file reference 40cdh/229205	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2004/003698	International filing date (<i>day/month/year</i>) 07 April 2004 (07.04.2004)	Priority date (<i>day/month/year</i>) 16 May 2003 (16.05.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HYDAC FLUIDTECHNIK GMBH			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 9 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input checked="" type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report
18 April 2006 (18.04.2006)

Authorized officer

Yolaine Cussac

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. +41 22 740 14 35

Telephone No. +41 22 338 70 80

Bartels und Partner
Patentanw.

Eingegangen:
Received: 04. MAI 2006

PATENT COOPERATION TREATY

TERMIN

Translation

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

Applicant's or agent's file reference
40cdh/229205

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2004/003698

International filing date (day/month/year)

07.04.2004

Priority date (day/month/year)

16.05.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

HYDAC FLUIDTECHNIK GMBH

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input checked="" type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/003698

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/003698

Box No. II

Priority

1. ☒ The following document has not yet been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/003698

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	3, 5, 8	YES
	Claims	1, 2, 4, 7, 9	NO
Inventive step (IS)	Claims	3, 5, 8	YES
	Claims	1, 2, 4, 6, 7, 9	NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims		NO
2. Citations and explanations:			
<p>1. In the present communication, reference is made to the following documents:</p> <p>D1: US 6 330 798 B1 (STEPHENSON DWIGHT) 18 December 2001 (2001-12-18)</p> <p>D2: EP 0 467 128 A (SPX CORP) 22 January 1992 (1992-01-22)</p> <p>D3: DE 199 32 139 A (MANNESMANN REXROTH AG) 11 January 2001 (2001-01-11)</p> <p>D4: US 4 848 721 A (CHUDAKOV STANISLAV) 18 July 1989 (1989-07-18)</p> <p>D5: EP 0 503 188 A (STERLING HYDRAULICS INC) 16 September 1992 (1992-09-16)</p> <p>D6: GB 901 061 A (VON ROLL AG) 11 July 1962 (1962-07-11)</p> <p>D7: PATENT ABSTRACTS OF JAPAN vol. 2000, No. 04, 31 August 2000 (2000-08-31) & JP 2000 009250 A (MASUDA KENJI), 11 January 2000 (2000-01-11)</p>			
<p>2. INDEPENDENT CLAIM 1</p>			
<p>2.1. The present application does not meet the requirements of PCT Article 33(1) because the subject-matter of claim 1 is not novel within the</p>			

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/003698

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

meaning of PCT Article 33(2). Document D1 discloses (the references between parentheses relate to this document):

A proportional seat valve comprising a valve housing (102) and three fluid connections (108, 110, 164) extending through the valve housing, and a main piston (114), running in the valve housing (102) and a pilot piston (146), for executing a pilot control (144), which may be controlled by means of a current-carrying magnetic device (126), whereby when a pilot control (144) is opened, fluid from one (108) of the two connections (108, 110) which can be controlled by the main piston (114) reaches the third connection (164) which can be controlled by the pilot piston (146), by means of a cross-sectional narrowing (148) in the main piston (114) and the pilot control (144), and whereby, as a result of the corresponding pressure drop, the main piston (114) achieves a control position, which can control both fluid connections (108, 110) with regard to fluid amount.

2.2. Documents D2 (see in particular column 4, line 28 - column 6, line 52, figure 1), D3 (see in particular column 3, line 5 - column 7, line 45, figures 2, 3), D4 (see in particular column 5, line 8 - column 10, line 34, figures 1, 2), D5 (see in particular column 4, line 33 - column 9, line 35, figures 2, 3) and D6 (see in particular page 2, line 1 - page 3, line 120, page 4, lines 99-108, figures 1, 2) also disclose a device having the features of claim 1.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/003698

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

3. DEPENDENT CLAIMS

- 3.1. The dependent claims 2, 4, 6, 7 and 9 do not seem to contain any additional features which, in combination with the features of any claim to which claims 2, 4, 6, 7 and 9 are referred back, meet the PCT requirements with respect to novelty and inventive step. The reasons are as follow:
- 3.2. With respect to claims 2, 4, 7 and 9: the subject-matter of claims 2, 4, 7 and 9 is not novel (PCT Article 33(2)):
- 3.3. With respect to claims 2, 4 and 7: see document D5, in particular column 4, line 33 - column 9, line 35, figures 2, 3.
- 3.4. With respect to claim 9: see document D1, in particular balance (150), figure 1.
- 3.5. With respect to claim 6: the subject-matter of claim 6 does not involve an inventive step (PCT Article 33(3)): see document D7, in particular the abstract and figure 1. Document D7 describes the features from claim 6 and thus exhibits the same advantages as the present application. A person skilled in the art would therefore consider the incorporation of these features into the device described in D3 as a customary measure for solving the defined problem.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/003698

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

3.6. The feature combination contained in the dependent claim 3 is neither known from the available prior art nor suggested by it. The reasons are as follow:

Document D5 is considered to be the closest prior art. It discloses (the references between parentheses refer to this document):

a proportional seat valve in which a compression spring (66) engages in a recess (64) in the main piston (40).

The subject-matter of the dependent claim 3 differs from this in that:

a bearing element, which is connected to the free end of the pilot piston via a bearing ball, is arranged at the free end of the compression spring which is assigned to the pilot piston.

The problem to be solved with the present invention can thus be considered to be providing a simple attachment between a pilot piston and main piston.

Since the features of the dependent claim 3 are not specified in their entirety in any of the documents cited in the search report or acknowledged in the introductory part of the description, the subject-matter of claim 3 is novel (PCT Article 33(2)). It also involves an inventive step since the features of the characterizing part of claim 3 are not suggested by any submitted document.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/003698

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

4. INDUSTRIAL APPLICABILITY

The subject-matter of claims 1-9 can be manufactured and used and can therefore be considered to be industrially applicable.